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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/682,255	10/10/2003	Andrey Vyshedskiy		8260

7590 03/23/2005

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EXAMINER	
ASTORINO, MICHAEL C	
ART UNIT	**PAPER NUMBER**
3736	

DATE MAILED: 03/23/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	**Application No.** 10/682,255	**Applicant(s)** VYSHEDSKIY ET AL.	
	Examiner Michael C Astorino	**Art Unit** 3736	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE *3* MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *10 October 2003*.
2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.
3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-9* is/are pending in the application.
4a) Of the above claim(s) _____ is/are withdrawn from consideration.
5)☐ Claim(s) _____ is/are allowed.
6)☒ Claim(s) *1-9* is/are rejected.
7)☐ Claim(s) _____ is/are objected to.
8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.
10)☒ The drawing(s) filed on *10/10/2003* is/are: a)☐ accepted or b)☒ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a)☐ All b)☐ Some * c)☐ None of:
1.☐ Certified copies of the priority documents have been received.
2.☐ Certified copies of the priority documents have been received in Application No. _____.
3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date *10/10/2003*.
4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

Drawings

1. The drawings are objected to because reference number "305" is described in the specification, page 5, line 17 as "seven acoustic sensors" and in line 20 as a "chest piece." Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as "amended." If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

Claim Objections

2. In regards to claim 1, the applicant should amend the claim to state "(c) means for physically connecting…" and not "(C) means to physically connect…"

Claim Rejections - 35 USC § 112

3. The following is a quotation of the second paragraph of 35 U.S.C. 112:

> The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

4. Claims 4 and 9 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

5. Regarding claims 4 and 9, the phrase "such as" renders the claim indefinite because it is unclear whether the limitations following the phrase are part of the claimed invention. See MPEP § 2173.05(d).

6. Claim 5 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. The applicant uses trademark, "Windows" and "Palm." in the claim. See below, MPEP § 2173.05(u). "…A trademark or trade name does not identify or describe the goods associated with the trademark or trade name…" The examiner suggests removing "Windows" and "Palm."

> **2173.05(u) Trademarks or Trade Names in a Claim**
>
> The presence of a trademark or trade name in a claim is not, *per se*, improper under 35 U.S.C. 112, second paragraph, but the claim should be carefully analyzed to determine how the mark or name is used in the claim. It is important to recognize that a trademark or trade name is used to identify a source of goods, and not the goods themselves. Thus a trademark or trade name does not identify or describe the goods associated with the trademark or trade name. See definitions of trademark and trade name in MPEP § 608.01(v). A list of some trademarks is found in Appendix I.
>
> If the trademark or trade name is used in a claim as a limitation to identify or describe a particular material or product, the claim does not comply with the requirements of the 35 U.S.C. 112, second paragraph. *Ex parte Simpson*, 218 USPQ 1020 (Bd. App. 1982). The claim scope is uncertain since the trademark or trade name cannot be used properly to identify any particular material or product. In fact, the value of a trademark would be lost to the extent that it became descriptive of a product, rather than used as an identification of a source or origin of a product. Thus, the use of a trademark or trade name in a claim to identify or describe a material or product would not only render a claim indefinite, but would also constitute an improper use of the trademark or trade name.
>
> If a trademark or trade name appears in a claim and is not intended as a limitation in the claim, the question of why it is in the claim should be addressed. Does its presence in the claim cause confusion as to the scope of the claim? If so, the claim should be rejected under 35 U.S.C. 112, second paragraph.

Claim Rejections - 35 USC § 102

7. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

8. Claims 1-9 are rejected under 35 U.S.C. 102(e) as being anticipated by Mault et al. US Patent Number 6,790,178 B1.

In regards to claims 1-9, Mault et al. discloses the following, in columns 13, lines 56-67, column 14, lines 1-67 and column 15, lines 1-19:

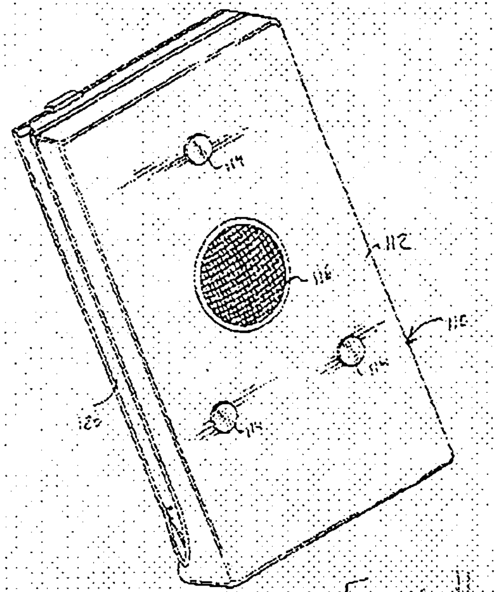

Figure 11

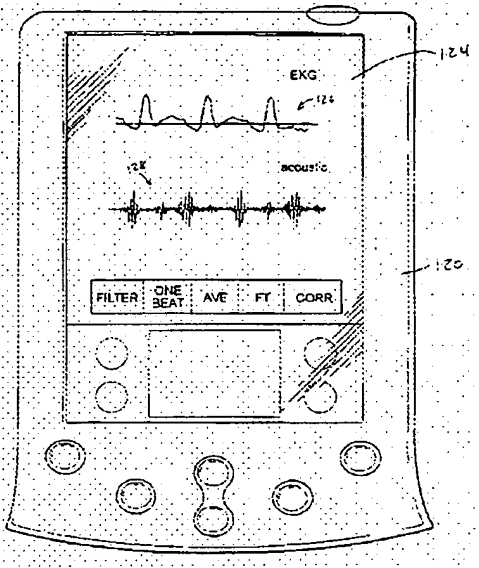

Figure 12

EKG/Heart Sound Module

Referring now to FIG. 11, an attachment for a PDA 120 that contacts the chest and records an EKG signal and/or heart sounds is generally shown at 110. There may be a headphone jack on the PDA 120 or on the module for headphones worn by a physician. The PDA may be used for filtering, storing, or other manipulation of the heart sounds or EKG signal.

The module 110 has a housing 112 with electrodes 114 and microphone 116 preferably mounted so as to protrude from the housing. Three electrodes 114 are shown, but any number of electrodes greater than one may be used. Alternatively, one or more of the electrodes may be separable from the module and connected thereto using wires. For example, the module may not include any electrodes on its housing, but instead have several electrodes wired to it so that the electrodes may be placed on the patient while the physician holds the PDA. As another example, one electrode may be on the housing so that it contacts the user's hand and one or more additional electrodes may be placed on the chest.

The module 110 forms an electrical and mechanical interface with the PDA 120 using an electrical connector adapted to match an electrical connection 122 of the PDA 120. Different electrical connectors and docking interfaces may be provided for different PDA designs, as previously discussed.

The microphone 116, which may be supported on the housing or in wired or wireless communication therewith, receives cardiovascular sounds from the person, such as the sounds of heartbeats, the sound of respiration, or a combination of sounds from different sources. The housing 112 of module 110 may contain electronic circuitry, so as to receive, process, and store to memory EKG and microphone signals.

For example, the electronic circuitry mounted within the housing may be used to process electrocardiograph data and cardiovascular sound data by converting it into a form suitable for transmission to the PDA, such as using analog to digital circuitry. Memory may be omitted from the module 110, as signals may be transmitted in real time to the PDA for display and/or storage on the PDA. The PDA may also perform the data processing. Either the PDA 120 or module 110 may additionally contain an interface for transferring data to a memory module. As with previous embodiments, communication between the PDA and module may be by wired or wireless transmission, or by the transfer of memory modules, or some combination of these means. Also, the physiological monitor module may, when coupled with the PDA, cause the PDA to recognize its presence and to load appropriate software, or to query the module to identify the module and load software. The software may be stored in the module or on the PDA. The PDA may display or produce instructions for performing a test.

FIG. 11 [Fig. 12] shows a PDA 120, having a display 124, presenting an electrocardiogram (EKG) 126 and an acoustic signal 128 from the heart. The invention uses the display capabilities and computing capabilities of the PDA to display and analyze cardiac signals from a person. A sound card and speaker, or other sound production system, either built into or an accessory for the PDA, may be used to play back the acoustic signal, or an acoustic interpretation of the EKG.

The PDA may be used to process information, e.g. show frequency components of the heartbeat, perform analog or digital filtering, perform Fourier transforms, construct autocorrelation or cross-correlation data, etc, using software run on the PDA. Acoustic processing may be either hardware or software based. As one example, low frequencies of the acoustic signal, related to valve openings, may be filtered and displayed. High frequencies, such as related to heart murmurs, may also be extracted from the acoustic and/or electrical signals by filtering, and be displayed on the PDA. Monitoring may be in real time, showing heartbeats as they occur, or averages of several heartbeats may be displayed. The data may be recorded to memory and transmitted to a remote device, such as a physician's computer, transmitted to a database or web-site using a communications network, and/or added to medical records such as through a wireless Internet connection, or in other ways.

The invention may be used as a digital stethoscope by a physician. The physician may record the heart data (EKG, phonocardiograms) to a memory module along with a dictated memo about the patient, and other data about the patient. The memory module may then be passed to a secretary for addition to a digital file, electronic record, or database of patient information.

Module 110 may transfer data to the PDA using a wireless transmission method. For example, the module may be held to the chest while data is transferred to the PDA using wireless transmission, with no mechanical association necessary. The module 110 may also contain circuitry for making a wireless Internet connection for data transfer to a remote computer system. The module may have electrical connections so as to connect additional electrodes via wires, in order to improve the EKG signal obtained. Further aspects of the EKG/heart sound module embodiment of the present invention may be understood by reference to co-pending provisional patent application Ser. No. 60/224,651.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Michael C Astorino whose telephone number is 571-272-4723. The examiner can normally be reached on Monday-Friday, 8:30AM to 3:30PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Max Hindenburg can be reached on 571-272-4726. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Michael Astorino
March 15, 2005